

RELEASABLE, REPEATABLE ELECTRICAL CONNECTION EMPLOYING  
COMPRESSION

ABSTRACT

An electrical connection of a transfer station releasably,  
5 repeatably electrically couples with respect to a matching  
connection of a portable cartridge. A substrate in the portable  
cartridge has electrical contacts on a facing surface. In the  
transfer station, a matching circuitized flexible substrate has  
electrical contacts on a facing surface thereof, which are  
10 arranged to match the portable cartridge electrical contacts when  
in a face-to-face relationship. An elastomeric compression  
element, at the rear of the matching substrate, has individual  
protruding compression members contacting the rear surface and  
registered with corresponding individual electrical contacts.  
15 Elongated electrical contacts are registered with two adjacent  
individual compression members. A loader engages the portable  
cartridge, registering the cartridge substrate contacts in  
face-to-face relation with the matching flexible substrate  
electrical contacts, and exerting a normal force to the cartridge  
20 to compress the compression element and create non-wiping contact  
between the facing electrical contacts.